Remote Possibilities - Extending the Boundaries of Supply Chain Visibility

Lenny Marano, Director of Product Marketing
What are We Going to Cover

• The sharing of data across the value stream for varying users

• How that same data is empowering new and different types of automation

• How visibility into this data is changing the game for how factories are managed and supported
Product Development

- PLAN
- DESIGN
- DEVELOP
- SOURCE
- PRODUCE
- SELL
- TRACK
Customer Types

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Company Examples</th>
<th>Solution Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Manufacturers</td>
<td>Dickies, Hanes, Fruit &amp; Loom, Carhartt</td>
<td>PLM, CAD, Automation Systems</td>
</tr>
<tr>
<td>Brand Marketers</td>
<td>PVH, Ralph Lauren, adidas, Nike</td>
<td>PLM, CAD, Automation Systems</td>
</tr>
<tr>
<td>Specialty Retailers</td>
<td>GAP, BOSS, Limited Brands</td>
<td>PLM, CAD, Automation Systems</td>
</tr>
<tr>
<td>Mass Retailers</td>
<td>Walmart, Target, Macy’s, Zara</td>
<td>PLM, CAD, Automation Systems</td>
</tr>
<tr>
<td>Contract Manufacturers</td>
<td>Shenzou International, Esquel Group, TAL Group</td>
<td>PLM, CAD, Automation Systems</td>
</tr>
</tbody>
</table>
Customer Process Map

- **Plan**
- **Design**
- **Develop**
- **Source**
- **Produce**
- **Sell**
- **Track**

**Brand Manufacturers**

**Brand Marketers**

**Specialty Retailers**

**Mass Retailers**

**Contract Manufacturers**
Brand Manufacturers

Inspiration

PLM Tech Pack info to CAD Software
- Materials
- Artwork images
- Garment Details

BOM Calculation based on CAD Software data
- PLM sample request

3D Sample image for Markup Auto updates to PLM

Piece, model and Marker Info from CAD Software to PLM

3D Virtual Sample
- Sample Iterations

Pass Cut Data Wirelessly to Production

Ply Count / Marker Length / Splices / Color

Realtime Production Reports Viewable in the PLM System

Sample Comments/ Changes

Sales data from in-store or online feeds PLM for future planning

© 2016 Gerber Technology
Brand Marketers and Retailers

**PLAN**
- PLM Tech Pack info to CAD Software
  - Materials
  - Artwork images
  - Garment Details

**DESIGN**
- Piece, model and Marker Info from CAD Software to PLM

**DEVELOP**
- BOM Calculation based on CAD Software data
  - PLM sample request
- 3D Sample image for Markup Auto updates to PLM
- 3D Virtual Sample
- Sample Iterations

**SOURCE**
- Sample Comments/Changes
- Sales data from in-store or online feeds
- PLM for future planning

**TRACK**
- Realtime Production Reports Viewable in the PLM System

**PRODUCE**
- Pass Cut Data Wirelessly to Production
- Ply Count / Marker Length / Splices / Color

**Inspiration**
- 3D Virtual Sample
  - Sample Iterations
  - Pass Cut Data Wirelessly to Production
  - Ply Count / Marker Length / Splices / Color

© 2016 Gerber Technology
Contract Manufacturers

Inspiration

**Plan**
- PLM Tech Pack info to CAD Software
  - Materials
  - Artwork images
  - Garment Details

**Design**
- Piece, model and Marker Info from CAD Software to PLM

**Develop**
- BOM Calculation based on CAD Software data
  - PLM sample request
- 3D Sample image for Markup Auto updates to PLM
- 3D Virtual Sample
  - Sample Iterations

**Source**
- Sample Comments/Changes

**Produce**
- Pass Cut Data Wirelessly to Production
- Ply Count / Marker Length / Splices / Color

**Track**
- Realtime Production Reports Viewable in the PLM System
- Sales data from in-store or online feeds PLM for future planning

Confidential
Empowering Automation With Mass Production and Mass Customization
Empowered Automation

Mass Production

USE CAD SOFTWARE TO DESIGN PATTERN

USE PLANNING SOFTWARE TO CUTPLAN AND MAKE MARKERS AUTOMATICALLY OR INTERACTIVELY

GENERATES A PRINTED CUT-TICKET WITH BARCODE.

EASILY ACCESS RELEVANT JOB DETAILS AND METRICS.

SCAN THE CUT-TICKET LABEL FOR CUT FILE INFORMATION.

SCAN THE CUT-TICKET BARCODE TO RETRIEVE SPREAD DETAILS.
Empowered Automation

Mass Customization

USE CAD SOFTWARE TO DESIGN PATTERNS, INCORPORATE GRAPHICS, AND GENERATE PRINT FILE

DIGITALLY PRINT TRUE TO COLOR USING ICC PROFILE AND FABRIC PRINTER

EASILY ACCESS RELEVANT JOB DETAILS AND METRICS

SCAN AND CUT THE PRINTED FABRIC AUTOMATICALLY ON A Z1 WITH CONTOURVISION

© 2016 Gerber Technology
And It’s Rapidly Moving Beyond Apparel…..

USE CAD SOFTWARE TO DESIGN PATTERNS, INCORPORATE GRAPHICS, AND GENERATE PRINT FILE

DIGITALLY PRINT TRUE TO COLOR USING ICC PROFILE AND FABRIC PRINTER

EASILY ACCESS RELEVANT JOB DETAILS AND METRICS

SCAN AND CUT THE PRINTED FABRIC AUTOMATICALLY ON A Z1 WITH CONTOURVISION
Empowering Automation and Enabling the Factory of the Future

- Seamless data transfer from CAD to cut room
- Truly automated processes reduce labor and errors – How far away are we from producing a garment with no human intervention?
- Change the dynamics of flexible materials supply chain – Is one SKU of fabric possible?
Visibility is Critical

Shift Reports

Job Report Summary

Job Report Detail
Visibility is Critical… to Everyone Across the Value Chain

At the Cutter.....

And in the Cloud
Visibility is Changing the Game of Equipment Serviceability

Yesterday

Reactive
- Customer Identifies Problem
- Customer Initiates Service
- Parts or Kit Shipped
- Support Engineer Dispatched
- Problem Reproduced, Fixed
- Traditional Services

Today

Proactive
- System Identifies Problems
- System Initiates Service
- Customer Initiates Service
- Localized Parts Shipped
- Remote Diagnosis
- Remote Repair or Dispatch

Developing

Predictive
- Online System Monitors Data
- Diagnoses or Fixes Problem
- Automated, Self-managed
- Calls Customer Before Issue
- Fix before error occurs
- Transformational Services

Connected Devices
Remote Tools

Proactive Algorithms
Automated Analytics
Visibility is Changing the Game of Equipment Serviceability

- Easy to use, easy to read UI’s make remote monitoring easier than ever – like using your iPad
- Monitor over hundreds of distinct technical parameters of the cutter
  - Voltage, temperature, component operating hours etc.
  - Establish normal parameters by application
Monitor Production Remotely

- Parts, total units, or jobs per shift
Monitor Production Remotely

- Parts, total units, or jobs per shift
- Monitor cut time versus idle, or manual time
Everything You Need to Know in One Place
Concluding Comments

• Challenge your suppliers and other value chain participants on how you can collaboratively use data

• Reflect on your own processes, and on how data can empower new levels of automation

• Now’s the time to align your infrastructure to advantage of both today and tomorrow’s remote possibilities